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EXAMINER

PHAM, THIERRY L

ART UNIT PAPER NUMBER

2624

DATE MAILED: 12/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/661,898

Applicant(s)

WARD ET AL.

Examiner

Thierry L. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,8,9,13,16 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,8,9,13,16 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

- This action is responsive to the following communication: RCE filed on 11/18/05.
- Claims 1, 3-5, 8-9, 13, 16-17 are pending.
- Amendment After Final filed on 10/20/05 has been entered.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/18/05 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3-5, 8-9, 13, and 16-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The examiner is unclear whether “automatically” gathering, correlating, comparing, determining, adjusting, analyzing, weighting as cited in claims 1, 3-5, 8-9, 13, and 16-17 is an “inherent” feature of “automatically” selecting a print setting of a document from the plurality of print quality settings based on data relating to document contents, prior setting selections, and etc. The examiner has carefully examined the original filed specification, but fails to find any teachings relating to “automatically” gathering, correlating, comparing, determining, adjusting, analyzing, weighting. The original filed specification only teaches a method of “automatically” selecting one of a plurality of print quality settings based on data relating

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to document contents, prior print setting selections, and etc (see abstract and page 2, lines 25-28, and page 11, lines 8-13). As for prior arts rejection the examiner herein interprets as an “inherent” feature. Clarification is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 8, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shima (US 6149323), and in view of Hattori (US 5455895).

Regarding claim 1, Shima discloses a method of selecting of selecting one of a plurality of print settings (selecting from a plurality of stored print setting values for printing current document, fig. 3, col. 2, lines 15-67) for printing a current document comprising:

- gathering historical document data (gathering historical data of stored document such as titles, col. 3, lines 20-25) relating to prior print setting selections (stored print setting values A1-A4 or B1-B4, fig. 2, col. 3, lines 1-40 and col. 4, lines 6-45);
- correlating each prior print setting selection (print setting values correlated with print stored document, col. 3, lines 17-40) with one or more characteristics of the historical document data (i.e. title of a document, col. 3, lines 20-25), including user's prior print setting preference (each document is linked with a setting value files as shown in fig. 3 & 6);
- comparing (comparing correlated print setting values to the current document attributes to determine whether previous stored setting values can be used, if not, creates a new setting values, fig. 3, col. 4, lines 45 to col. 5, lines 1-60 and col. 7, lines 3-32) the correlated print setting selections to one or more characteristics of the current document to select a print setting from among the plurality of print settings.

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However, Shima fails to teach and/or suggest the processes are performed automatically for selecting the most compatible print setting mode based upon print data attributes.

Hattori, in the same field of endeavor for printing, teaches the processes are performed automatically for selecting the most compatible print setting mode based upon print data attributes (automatically selecting a print mode based upon print data, abstract, figs. 2-4, col. 1, lines 55 to col. 2, lines 34).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify print system method of Shima to include instructions for automatically selecting the most compatible print setting mode based upon print data attributes as taught by Hattori because of a following reason: (●) high degree of certainty and decreases chances of a misjudgment of a print mode (col. 1, lines 55-60); (●) to ensure high print output quality by utilizing the best compatible print mode; (●) automatically selecting best print mode without human invention reduces operating time and costs.

Therefore, it would have been obvious to combine Shima with Hattori to obtain the invention as specified in claim 1.

Regarding claim 8, Shima discloses a method of selecting one of a plurality of print settings for printing a current document (selecting from a plurality of stored print setting values for printing current document, fig. 3, col. 2, lines 15-67) comprising the steps of:

- gather prior document data (gathering historical data of stored document such as titles, col. 3, lines 20-25) relating to prior setting selections including a user's preferred print setting associated (stored print setting values A1-A4 or B1-B4, fig. 2, col. 3, lines 1-40 and col. 4, lines 6-45) with the prior document data (each document is linked with a setting value files as shown in fig. 3 & 6);
- comparing (comparing correlated print setting values to the current document attributes to determine whether previous stored setting values can be used, if not, creates a new setting values, fig. 3, col. 4, lines 45 to col. 5, lines 1-60 and col. 7, lines 3-32) the prior

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print settings selections and associated prior document data to at least one of the current document;

- selecting (step S6, fig. 3) a print setting for the document based on the comparison.

However, Shima fails to teach and/or suggest the processes are performed automatically for selecting the most compatible print setting mode based upon print data attributes.

Hattori, in the same field of endeavor for printing, teaches the processes are performed automatically for selecting the most compatible print setting mode based upon print data attributes (automatically selecting a print mode based upon print data, abstract, figs. 2-4, col. 1, lines 55 to col. 2, lines 34).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify print system method of Shima to include instructions for automatically selecting the most compatible print setting mode based upon print data attributes as taught by Hattori because of a following reason: (●) high degree of certainty and decreases chances of a misjudgment of a print mode (col. 1, lines 55-60); (●) to ensure high print output quality by utilizing the best compatible print mode; (●) automatically selecting best print mode without human invention reduces operating time and costs.

Therefore, it would have been obvious to combine Shima with Hattori to obtain the invention as specified in claim 8.

Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shima and Hattori, and further in view of Minagawa (US 6614550).

Regarding claim 3, the combinations of Shima and Hattori fail to teach and/or suggest automatically determining an amount of text data in the current document; and automatically adjusting a print setting associated with the current document based on the amount of text data and the user's prior print setting preference.

Minagawa, in the same field of endeavor for printing, teaches automatically determining an amount of text data (col. 9, lines 35-42) in the current document; and automatically adjusting (fig. 8, abstract, col. 2, lines 4-10 and col. 6, lines 18-28) a print

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setting associated with the current document based on the amount of text data and the user's prior print setting preference.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify print system method of Shima and Hattori to include instructions automatically determining an amount of text data in the current document; and automatically adjusting a print setting associated with the current document based on the amount of text data and the user's prior print setting preference as taught by Minagawa because of a following reason: (●) to save print medias (col. 9, lines 55-58). Therefore, it would have been obvious to combine Shima, Hattori, and Minagawa to obtain the invention as specified in claim 3

Regarding claim 4, Minagawa further teaches automatically determining an amount of image data (col. 9, lines 35-42) in the current document; and automatically adjusting a print setting (fig. 8, abstract, col. 2, lines 4-10 and col. 6, lines 18-28) associated with the current document based on the amount of image data and the user's prior print setting preferences.

Regarding claim 5, Minagawa further discloses automatically comparing an amount of text data in the document and an amount of image data (col. 9, lines 35-42) in the document with a user's prior print setting preference associated with prior documents having a similar amount of text data and image data; and automatically selecting (col. 9, lines 35-42) a print setting for the document from the plurality of print settings based on the comparison. Also notes: automatically determining amount of image data and text data within an document is well known and is taught by the cited prior art of record (US 5731823 to Miller et al).

Claims 9, 13, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shima (US 6149323), Leiman et al (US 6469796), and further in view of Hattori (US 5455895).

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Regarding claim 9, Shima discloses a method of selecting one of a plurality of settings for printing a current document (selecting from a plurality of stored print setting values for printing current document, fig. 3, col. 2, lines 15-67) comprising the steps of:

- analyzing a plurality of characteristics relating to document data in the document (gathering historical data of stored document such as titles, col. 3, lines 20-25), the plurality of characteristics including an input/output protocol (printer A or B, fig. 2), a host device type (name of the machine, col. 3, lines 20-25), an application being (printer driver A or B, fig. 2) used to print the document, and a type of print media being printed (paper type, col. 1, lines 20-25);
- comparing the plurality of characteristics relating to document data in the current document with a user's prior setting preference (comparing correlated print setting values to the current document attributes to determine whether previous stored setting values can be used, if not, creates a new setting values, fig. 3, col. 4, lines 45 to col. 5, lines 1-60 and col. 7, lines 3-32) associated with prior documents having similar characteristics (each document is linked with a setting value files as shown in fig. 3 & 6); and
- selecting (step S6, fig. 3) a print setting for the current document from the plurality of print settings based on the comparison.

Shima discloses a method for analyzing a plurality of characteristics relating to document data in the document, but fails to teach and/or suggest plurality of characteristics relating to document data in the document including a job queue status, and a time of day.

Leiman, in the same field of endeavor for printing, teaches a method for analyzing a plurality of characteristics relating to document data in the document including a job queue status (job status, fig. 11), and a time of day (time submitted, fig. 11).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made by modifying/adjusting the print setting values files (i.e. print mode) based on the characteristics of current document such as job status queue and time of day that was submitted for printing as taught by Leiman because of a following reason: to improve the quality of output product by using the most optimum print settings based upon document's characteristics.

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However, the combinations of Shima and Leiman fail to teach and/or suggest the processes are performed automatically for selecting the most compatible print setting mode based upon print data attributes.

Hattori, in the same field of endeavor for printing, teaches the processes are performed automatically for selecting the most compatible print setting mode based upon print data attributes (automatically selecting a print mode based upon print data, abstract, figs. 2-4, col. 1, lines 55 to col. 2, lines 34).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify print system method of Shima to include instructions for automatically selecting the most compatible print setting mode based upon print data attributes as taught by Hattori because of a following reason: (●) high degree of certainty and decreases chances of a misjudgment of a print mode (col. 1, lines 55-60); (●) to ensure high print output quality by utilizing the best compatible print mode; (●) automatically selecting best print mode without human invention reduces operating time and costs.

Therefore, it would have been obvious to combine Shima and Leiman with Hattori to obtain the invention as specified in claim 9.

Regarding claim 13, Shima further teaches the method of claim 9, further comprising the step of automatically weighting each of the plurality of characteristics according to at least one factor, including a factor associated with a setting in which the printer (resolution, col. 5, lines 10-20 and/or color/monochrome printing, col. 1, lines 19-21) is being used.

Regarding claim 17: Claim 17 recites limitations that are similar and in the same scope of invention as to those in claim 9 above except computer readable memory for storing computer programs. All computers/printers have some type of computer readable

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medium (i.e. storage device 81, fig. 6) for storing computer programs, hence claim 17 would be rejected using the same rationale as in claim 9.

Response to Arguments

Applicant's arguments, see pages 8-11, filed 10/20/05 with respect to the rejection(s) of claim(s) 1 under 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art references.

Applicant's arguments, see pages 8-11, filed 10/20/05 with respect to the rejection(s) of claim(s) 3-5, 9, 13, 17 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art references.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US 6141028 to Aruga, teaches a method for automatically selecting an best print mode based upon print media selected for print job.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thierry L. Pham whose telephone number is (571) 272-7439. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571)272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thierry L. Pham


GABRIEL GARCIA
PRIMARY EXAMINER